



The message from the IPCC report

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(Mains GS 3 : Conservation, environmental pollution and degradation, environmental impact assessment.)

Context:

The recent report of the Intergovernmental Panel on Climate Change (IPCC), the Sixth Assessment Report (AR6), titled 'Climate Change 2021: The Physical Science Basis', is the first of four that the Panel will issue over the next one and a half years.

Provide a summary assessment:

- The IPCC reports are eagerly awaited as they provide a summary assessment of all aspects of the challenge of global warming and past reports have heralded significant shifts in climate policy.
- This particular report has added significance as it is the only one of the four of AR6 to be ready before the 26th Conference of the Parties (COP26) of the UN Framework Convention on **Climate Change** to be held in Glasgow in November.

Key findings of the report:

- A significant section of the report reinforces what is already well known, though, importantly, with updated numbers, higher accuracy and specific regional assessments, including South Asia.
- Global surface temperature is now higher by 1.07°C since the pre-industrial era.
- The impact of climate change on the atmosphere, oceans and land is unmistakably of human origin and this impact is picking up pace.
- It is a striking fact that there is no part of the inhabited world that is now untouched by the impact of global warming.

- Carbon dioxide is the dominant source of warming and Aerosols contribute to reducing the impact of warming by other greenhouse gases, by almost a third.
- Methane reduction, while needed overall, is particularly significant only as part of the endgame as the drastic reduction of aerosols actually leads to an increase in warming.

Use of multiple lines of evidence:

- A major scientific advance in this report is the use of multiple lines of evidence (through precise technical methods) to pin down the values and trends of key climatic variables more accurately, and narrow their range of uncertainties.
- Climate predictions from models appear to be working better in many specific ways due to improved representation of basic processes and higher resolution, while the use of other evidence enables scientists to ensure that the modelling output is suitably filtered to match more closely the real world.
- Thus, the value of equilibrium climate sensitivity — the measure of how a specified increase in carbon dioxide concentration translates into long-term surface temperature rise — is now pinned down to the range of 2.5°C to 4.0°C, with a best estimate of 3°C, compared to the Fifth Assessment Report range of 1.5°C to 4.5°C.
- With the inclusion of the Indian Institute of Tropical Meteorology's Earth System Model among the climate models used in AR6, India too has joined the climate modelling fraternity.

Increase in climate extremes:

- The report expectedly projects an increase in climate extremes due to global warming, with heat waves, extreme rainfall events and occurrence of extreme sea levels all expected to intensify and be more frequent.
- Coincidentally, the IPCC session for the approval and release of the report was held in the background of news of unprecedented disasters from the global North, including massive forest fires, unprecedented rain and flooding, and record heat.

Restrict cumulative emissions

- A major finding of the report is that air pollution reduction and steep climate change mitigation are not complementary goals but require independent efforts over the short and medium term.
- This is particularly important as the claims of such a linkage have been used to argue that India, for instance, must cease the use of coal immediately, despite its continuing importance as the key element of the country's energy security.

Reaching net zero was not the determining factor:

- The truly disconcerting news for the global North is the report's clear message that reaching net zero was not the determining factor for the world to limit itself to a 1.5°C , or 2°C, or indeed any specific temperature increase.

- The report is clear that it is the cumulative emissions in reaching net zero that determine the temperature rise.
- This obvious conclusion from past reports and scientific literature had become something of a casualty in the massive campaign mounted on net zero by the developed countries with the partisan support of the United Nations Secretary General and UN agencies.

Clarion call for developed countries:

- India's Ministry for Environment, Forest and Climate Change pointed out net zero in a statement that "historical cumulative emissions are the cause of the climate crisis that the world faces today."
- It also noted that the "developed countries had usurped far more than their fair share of the global carbon budget."
- The limitations of the remaining carbon budget for 1.5oC are so stringent — a mere 500 billion tonnes of carbon dioxide for an even chance of keeping to the limit — that they cannot be met by promises of net zero 30 years from now.
- The report is indeed a "clarion call for developed countries to undertake immediate, deep emission cuts especially if they are not to deprive the rest of the world, barring China, of any hope of future development.

Little cheer for Global South

- The exposure of the misleading character of the **net zero campaign** can bring little cheer to the global South, for an equally disconcerting finding is that the world is set to cross the 1.5°C limit within 10-15 years.
- If deep emissions cuts by the three big emitters — the U.S., the European Union and China — are not forthcoming, even the prospect of a mild overshoot of the limit followed by a later decline is likely to be foregone.
- After years of procrastination in real action, the constant shifting of goal posts to avoid immediate emissions reduction, and marking time with their obsession with Article 6 negotiations to pass the burden on to developing countries, the developed countries now have nowhere to hide.

Humanity in quasi-permanent deprivation:

- India cannot save the world from the consequences of the neglect of those whose responsibility it was to lead in taking credible action.
- India has contributed less than 5% of global cumulative emissions to date, with per capita annual emissions a third of the global average.
- India is also the only nation among the G20 with commitments under the Paris Agreement that are even 2°C warming-compatible.
- India needs its development space urgently to cope with the future, one where global temperature increase may be closer to 2°C.

- The prospect of keeping almost a sixth of humanity in quasi-permanent deprivation for the rest of the century as a consequence cannot even be contemplated.

Conclusion:

- World needs to focus on definite cumulative emission targets keeping equity and historical responsibility in view, immediate emission reductions by the developed countries with phase-out dates for all fossil fuels.
- Massive investment in new technologies and their deployment, and a serious push to the mobilisation of adequate climate finance is the need of the hour.
- This is the message that the IPCC report has sent to this year's climate summit and the world.